NAEP
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Measure Up

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Assessment news for elementary school teachers

Facts About NAEP 2008

- From January 7 to March 14, 2008, over 13,000 nine-year-olds will take the NAEP long-term trend assessment in reading or mathematics.
- From January 28 to March 7, 2008, over 28,000 fourth-graders will take the NAEP main assessment in reading, mathematics, or science.
- Over 800 elementary schools have been selected to participate in NAEP 2008.
- Over 600 NAEP staff will administer NAEP 2008 to students.

LONG-TERM TREND:

Three decades of student performance in reading and mathematics

The NAEP program includes the long-term trend and the main assessments. The long-term trend component uses assessments that remain substantially unchanged each time a subject is assessed, allowing students' progress in a subject to be measured over a long period of time. The main assessment, on the other hand, is periodically updated to reflect contemporary changes in educational policies, methods, and institutions, and results in shorter trend lines. Additionally, students are sampled by age for long-term trend (9-, 13-, and 17-year-olds) and by grades 4, 8, and 12 for the main assessments. (Additional key differences between NAEP's long-term trend and main assessments are discussed on page 4.) The last long-term trend assessment was administered in 2004. Key findings are listed below.

- Nine-year-olds' average reading score in 2004 was higher than in any previous assessment year.
- White, Black, and Hispanic 9-year-olds' average reading scores increased between 1999 and 2004, by 5, 15, and 12 points, respectively.
- The average mathematics score of 9-year-olds was higher in 2004 than in any previous assessment year.
- White, Black, and Hispanic 9-year-olds' average mathematics scores increased between 1999 and 2004 by 9, 13, and 17 points, respectively.
- The White and Black score gaps for 9-year-olds in both reading and mathematics were smaller in 2004 than in the first assessment years, 1971 and 1973, by 18 and 12 points, respectively.
- The White and Hispanic score gap in mathematics for 9-year-olds narrowed from 26 points in 1999 to 18 points in 2004. ■

Source: Perie, M., and Moran, R. (2005). *NAEP 2004 Trends in Academic Progress: Three Decades of Student Performance in Reading and Mathematics* (NCES 2005-464). U.S. Department of Education, Institute of Education Sciences, National Center for Educational Statistics. Washington, DC: Government Printing Office.

LONG-TERM TREND: Reading

The long-term trend reading assessment was designed to measure students' ability to locate specific information; make inferences based on information in two or more parts of a passage; and identify the main idea in a passage. The assessment requires students to read and answer questions based on a variety of materials, including informational passages, literary texts, and documents.

Students' comprehension of these materials is assessed with both multiple-choice and constructed-response questions. The set of reading passages and questions included in the trend assessments has been kept essentially the same since 1984. See below for sample questions and 2004 performance results for 9-year-olds. ■

Question 1: 42% of 9-year-olds gave the correct response, C.

Question 2: 68% of 9-year-olds gave the correct response, D.

Question 3: 68% of 9-year-olds gave the correct response, A.

Question 4: 65% of 9-year-olds gave the correct response, B.

1. Read the sentences in the paragraph below and choose the sentence that does NOT belong with the others.

Colorado is a western state with many mountains. Colorado has more than 1,000 peaks two miles high. Gold was discovered in Colorado in 1859. A total of 54 of the 69 highest mountains in the United States are in Colorado.

A) Colorado is a western state with many mountains.
B) Colorado has more than 1,000 peaks two miles high.
C) Gold was discovered in Colorado in 1859.
D) A total of 54 of the 69 highest mountains in the United States are in Colorado.

Read the newspaper advertisement and answer questions 2-4.

WANTED

Persons interested in earning between $35 and $45 per month delivering the Post newspaper. Help needed in most areas. Papers delivered to your home between 5 and 6 a.m.

Requirements for News Carrier:

1. Must be at least nine years old.
2. Must be reliable.
3. Must deliver all papers by 7 a.m., 7 days a week.
4. Must take collections during the last days of every month.

If you can meet these requirements, call 584-3640 Monday-Friday. 8 a.m. through 4 p.m. Ask for the Circulation Department.

2. According to the advertisement, what would you do if you are interested in the job and meet the requirements?

A) Apply in person at the *Post.*
B) Write the *Post* for a job application form.
C) Wait for the openings to be published in the *Post.*
D) Call the *Post* Circulation Department.

3. David and Mary are both reliable eight year olds and have applied for the job. What will probably happen?

A) They will not get the job because they are too young.
B) They will get the job since they are reliable.
C) They will not get the job unless they have bicycles.
D) They might get the job if they can work at the right times.

4. By what time must the news carrier deliver all the papers?

A) By 6 every morning.
B) By 7 every morning.
C) By 8 every morning, except weekends.
D) By 7 every evening.

LONG-TERM TREND: Mathematics

The long-term trend mathematics assessment was designed to measure students' knowledge of basic facts; ability to carry out numerical algorithms using paper and pencil; knowledge of basic measurement formulas as they are applied in geometric settings; and ability to apply mathematics to daily-living skills (such as those related to time and money). The assessment has a computational focus and contains a range of multiple-choice and constructed-response questions. It covers the following topics: numbers and numeration; measurement; shape, size, and position; variables and relationships; and mathematical application, knowledge, skills, and understanding. The mathematics trend assessments contain questions designed to measure performance on sets of objectives developed by nationally representative panels of mathematics specialists, educators, and other interested parties. Although some changes were made from assessment to assessment prior to 1990, some questions were retained from one assessment to the next to measure trends in achievement over time. See below for sample questions and performance results for 9-year-olds in 2004. ■

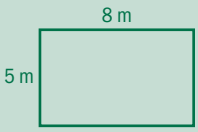
1. Which is worth the most?

A) 35 pennies
B) 1 quarter
C) 4 dimes

Question 1: 77% of 9-year-olds gave the correct response, C.

2. What is the PERIMETER of this rectangle?

A) 13 meters
B) 26 meters
C) 40 meters
D) 80 meters



Question 2: 51% of 9-year-olds gave the correct response, B.

3. A school bicycle rack holds 18 bicycles. There are 12 bicycles already in the rack. How many more bicycles can be put in the rack?

Answer _____

Question 3: 77% of 9-year-olds gave the correct response, 6.

4.
59
46
82
+68

Answer _____

Question 4: 57% of 9-year-olds gave the correct response, 255.

5.
314
x 12

Answer _____

Question 5: 20% of 9-year-olds gave the correct response, 3,768.

- *To use released long-term trend questions in the classroom, teachers should visit* ***http://nces.ed.gov/nationsreportcard*** *and select "Sample Questions."*
- *From there, teachers can select "Search Options" and "Long-Term Trend Questions," followed by the subject and age 9. A series of questions will appear and teachers can review the questions, sample student responses, and performance data for students nationwide.*

What Are the Differences Between Long-Term Trend NAEP and Main NAEP?

Although long-term trend and main NAEP both assess mathematics and reading, there are four main differences—the content assessed, the students selected, the administration timing, and the results reported. These differences mean that results from long-term trend (LTT) and main NAEP cannot be compared directly, although comparisons of the patterns over time of the two assessments, especially for student demographic groups, may be informative, keeping in mind the content differences.

	Long-Term Trend Assessment	Main NAEP Assessment
Purpose	Measures student performance in mathematics and reading every 4 years. Last reported for 2004; will be reported next for 2008.	Measures student performance in mathematics and reading every 2 years, most recently in 2007. Other subjects are also assessed.
Content Assessed	Has remained essentially unchanged since first administration (1971 for reading, 1973 for mathematics), although some changes were initiated in 2004. **Note:** Questions and assessment instrument are very different from main NAEP; the plan for the LTT assessment has been static, whereas frameworks for main NAEP change. **Reading** features shorter passages, and focuses on locating specific information, making inferences, and identifying the main idea of a passage. Students respond to questions in multiple-choice format; there are also a few questions requiring an extended answer. **Mathematics** focuses on basic computational skills in four content areas: numbers and operations, measurement, geometry, and algebra. Students respond to questions in multiple-choice format; there are also a few short answer and a few extended answer. Students are not asked to show or explain their work.	Changes about every decade to reflect changes in curriculum in the nation's schools. New frameworks reflect these changes. **Reading** requires students to read longer passages or pairs of passages; measures a range of reading skills, from identifying explicitly stated information, to making complex inferences about themes, to comparing multiple texts on a variety of dimensions. Students respond to questions of three possible types: multiple choice, short answer, and extended answer. **Mathematics** focuses on five content areas: number properties and operations, measurement, geometry, data analysis and probability, and algebra. Students respond to questions of several possible types: multiple choice, short answer, and extended answer. Students may be asked to explain their work.
Students Sampled	Selected by age (9-, 13-, and 17-year olds) to represent the nation. Smaller sample sizes than in main NAEP restrict comparisons to main demographic groups. In 2004, results could be reported only for White, Black, and Hispanic students, and for public schools.	Selected by grade (4, 8, and 12). Students represent the nation in even-numbered years, but also represent states and selected urban districts in odd-numbered years. Larger sample sizes usually permit reporting results for smaller minorities, such as Asian/Pacific Islanders and American Indians.
Administration	Assessment every 4 years, throughout the school year: • October through December: Age 13 • January through March: Age 9 • March through May: Age 17	Mathematics and reading assessed every 2 years, but assessment of other subjects requires administration of main NAEP each year from late January through early March.
Results Reported	Provides national results only on performance and how it has changed over time. Performance levels are reported using scale scores.	Provides results on performance and how it has changed over time using scale scores as well as achievement levels (*Basic, Proficient,* and *Advanced*). Results have been produced for the nation and the participating states and other jurisdictions since 1990, and for selected urban districts (on a trial basis) since 2002.

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